

# Public Health Response to Clandestine Methamphetamine Laboratory Sites

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## **Environmental Public Health Leadership Institute Fellow:**

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## **EXECUTIVE SUMMARY:**

The identification of significant numbers of Clandestine Drug Laboratory (CDL) sites in Mid-Michigan has created a potential health risk for site occupants and a generally unsatisfactory system for site clearance. Methamphetamine production in Michigan, in particular, is solely based on small scale production sites, almost solely in residential areas. There are currently no federal or State of Michigan Standards or Guidelines for CDL site clean-up or clearance, and no standardized regulatory procedure for local officials. Many states have already adopted clean-up standards but they cover a wide range of approaches each with potential cost/benefit advantages and disadvantages. There is also no source of collected data on site disposition after initial identification. We do have data for incidence of discovered CDLs but no prevalence data nor reliable data on clean-up methods or costs.

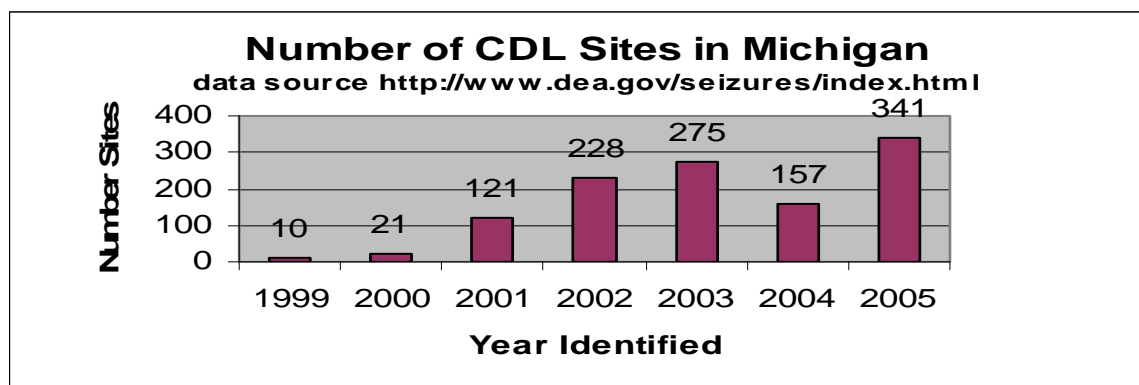
This project sought to identify stakeholders, incorporate their varied needs and opinions, and develop state guidelines for clean-up and clearance which encourage safe and rapid re-occupancy. This project also seeks to create better partnerships between environmental health agencies, housing agencies, and landlord. This project also seeks to gather and disseminate data on site prevalence and disposition.

## **INTRODUCTION/BACKGROUND:**

There has been a significant increase in residential sites discovered harboring CDL's, specifically manufacturing methamphetamines (meth)<sup>1</sup>. The number of identified meth CDL's in the State of Michigan has increased from 10 in 1999 to 341 in 2005 (available at: [www.dea.gov](http://www.dea.gov)). There are many reasons cited for this increase, including; increased methamphetamine use<sup>2</sup>, increased prosecution of other drug use<sup>3</sup>, ease of information transmission (internet)<sup>4</sup>, and even the psychology of fads. Regardless of causation, meth production is subject to economic forces.

Marijuana can be grown almost anywhere in the continental United States but requires a sufficient area of "discrete" growing land or significant investment in greenhouse equipment. Cocaine may be processed from coca leaves but requires large amounts of coca leaf raw material. Such economic constraints encourage the development of fairly large scale production coupled with an equally large scale distribution network. The result is fewer, but larger production sites and a large distribution network (and subsequent crime).

Methamphetamine may be produced in small amounts, with readily available ingredients<sup>5</sup>. Techniques and recipes are widely available. This has encouraged the growth of many small production centers and reduced the need for distribution networks<sup>6</sup>. Most meth production is small scale and designed to service a small, close nit group of consumers, often friends and family.



This phenomena has brought a new version of classic drug related public health problems and created a new public health issue<sup>7</sup>, how to deal with the identified CDL site. There are several methods for production of methamphetamine, all of which use chemicals that have the potential of contaminating the production site. Additionally, all common meth production techniques release methamphetamine itself into the air which almost always contaminates the site<sup>8</sup>. Most of these sites are residential. Because of the small scale of operations, CDL's are often moved from site to site periodically, to prevent discovery by law enforcement. Any one manufacturer therefore may contaminate many sites.

Most federal legislation has focused on the drug itself. The *Comprehensive Methamphetamine Control Act of 1996 (MCA)* broadened the controls on listed chemicals used in the production of methamphetamine (information available at: <http://www.fda.gov/cder/news/methamphetamine.htm>). This was followed by the *Combat Methamphetamine Epidemic Act of 2005*, a nationwide measure to limit access to drugs containing ephedrine, pseudoephedrine, and phenylpropanolamine. Both of these acts have acted to begin shifting the economic forces away from small scale manufacturing. It remains to be seen whether or not this will encourage the growth of large scale manufacturing and distribution.

The *Children's Health Act of 2000* included provisions requiring the reporting of discovered CDL's to their respective states and to the federal Department of Drug Enforcement Administration. It also provides money to law enforcement agencies for laboratory "clean-up". However, this has been interpreted as funding the cost of securing the site by law enforcement, and the removal and disposal of bulk chemicals found. No moneys have been made available for site environmental investigations or clearance.

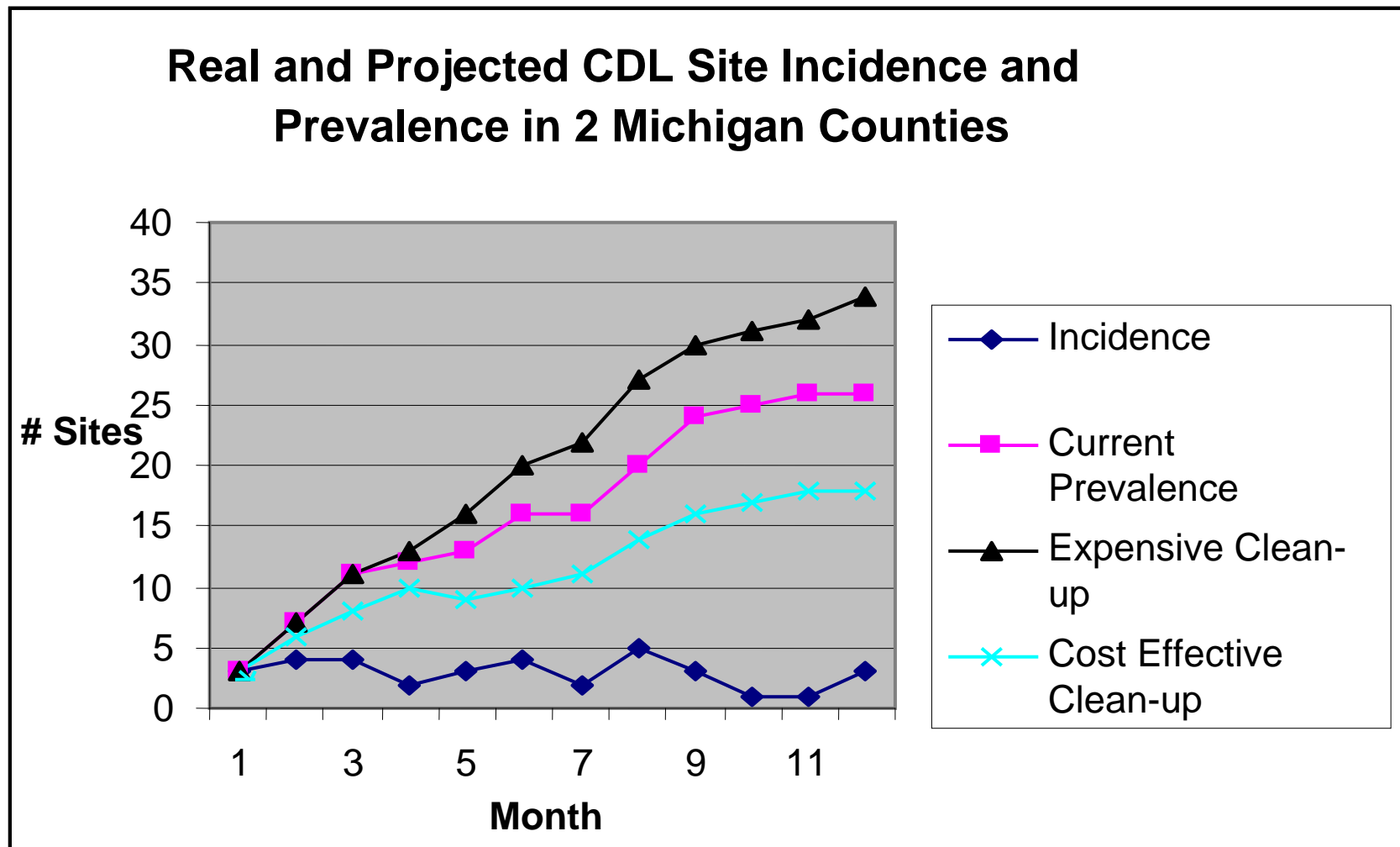
There are also no federal guidelines for what constitutes a site clearance. There are also no definitive studies on the potential health risks associated with former CDLs.

Currently the State of Michigan (Public Act 307 of 2003) places authority over site clearance on local housing code agencies. The assumption on the part of the state legislature was that such agencies would require these sites to be inspected and "cleared" before occupancy to prevent hazardous chemical exposure to residents. The State of Michigan did not provide a set of clean-up standards or guidelines or any money. Local housing code officials are unprepared to make such determinations.

The cost of inspection and clean-up can be significant. These costs are highly dependent upon the specific requirements for clearance. There is a wide variety of state guidelines for meth site clearance. Some require extensive testing, some require state certified inspectors, and some allow property owners to define their own clearance. CDLs established in lower value homes are often either reopened illegally or abandoned. Counties which have seen an increase in meth-lab homes begin accumulating vacant “red-tagged” homes.

**Problem Statement:** *Due to both cost of site clearance and lack of defined standards, identified CDLs have begun to accumulate in Michigan counties. These sites pose a potential (though inadequately defined) exposure risk to future occupants. These sites have either been reoccupied without adequate clean-up or abandoned altogether. There is a need in the State of Michigan for adequate but cost effect clean-up standards. There is a need throughout the United States for data on the disposition of these sites.*

*Behavior Over Time Graph:*



The diagram, titled "CDL Clean-Up Standard Development 'Shifting the Burden'", illustrates a cycle of factors leading to a problem and then to two potential solutions. It features three thought bubbles and two rectangular boxes connected by arrows.

**Top Thought Bubble:** "We need to do something with these properties. Mental models that encourage 'Quick Fix', no national consensus on standards therefore agency must justify standards."

**Bottom Left Thought Bubble:** "What can undermine development of cost effective standards is the different needs and desires of stakeholders."

**Right Thought Bubble:** "Lack of cost effective guidelines encourages: avoidance of 'real' clean-up or abandoning property both resulting in accumulation of potentially hazardous property."

**Top Box:** "Quick Fix: 'Red Tag' home and require proof of clean-up."

**Bottom Box:** "Long term fix requires adoption of cost effective clean-up standards which landlords, tenants, and enforcing agencies can accept."

**Central Box:** "Problem: Accumulation of potentially hazardous property, either unsatisfactory clean-up or abandoned property."

**Flow:** Arrows point from the top and bottom left thought bubbles to the top box. An arrow points from the top box to the central box. An arrow points from the right thought bubble to the bottom box. An arrow points from the bottom box to the central box. A curved arrow points from the central box back to the right thought bubble, completing the cycle. There are also two equals signs (=) on the arrows pointing to the central box, suggesting a balance or comparison between the two paths.

### ***10 Essential Environmental Health Services:***

Describe how your project seeks to enhance or fulfill one or more of the 10 Essential Environmental Health Services and/or the three (3) functions described in the IOM report: assessment, policy development and assurance.



### ***National Goals Supported***

1. CDC Health Protection Goals are available at: <http://www.cdc.gov/about/goals/default.htm>. Among these goals are specific goals for physical sites, including residential sites (Healthy Homes). This project seeks to ensure safe reoccupancy of potentially contaminated residential sites. The work done here will assist in developing a better working relationship between environmental and public health and housing agencies. The lessons learned have application to other residential, environmental issues such as mold remediation. Also these site based goals include communities (Healthy Communities). There is considerable data accumulating that many community factors influence the health of residents, these factors include quality of neighborhoods including abandoned properties. This project seeks to reduce property abandonment.
2. The National Strategy to Revitalize Environmental Public Health Services can be found at <http://www.cdc.gov/nceh/ehs/Docs/nationalstrategy2003.pdf>. Among the listed goals is Goal IV, Create Strategic Partnerships. This project seeks to create a missing partnership. This is the partnership between environmental health, housing agencies, and landlords. I am a founding member of the Michigan Association of Housing Officials and the only representative from either state or local public or environmental health agencies in the organization. I am also the first state or local government, environmental agency representative on the Mid-Michigan

Landlord Association (or any of the Michigan landlord organizations). The State of Michigan Clandestine Drug Laboratory Guidelines Task Force brought together landlords, housing officials, environmental consultant firms, and state and local environmental agencies to develop workable guidelines.

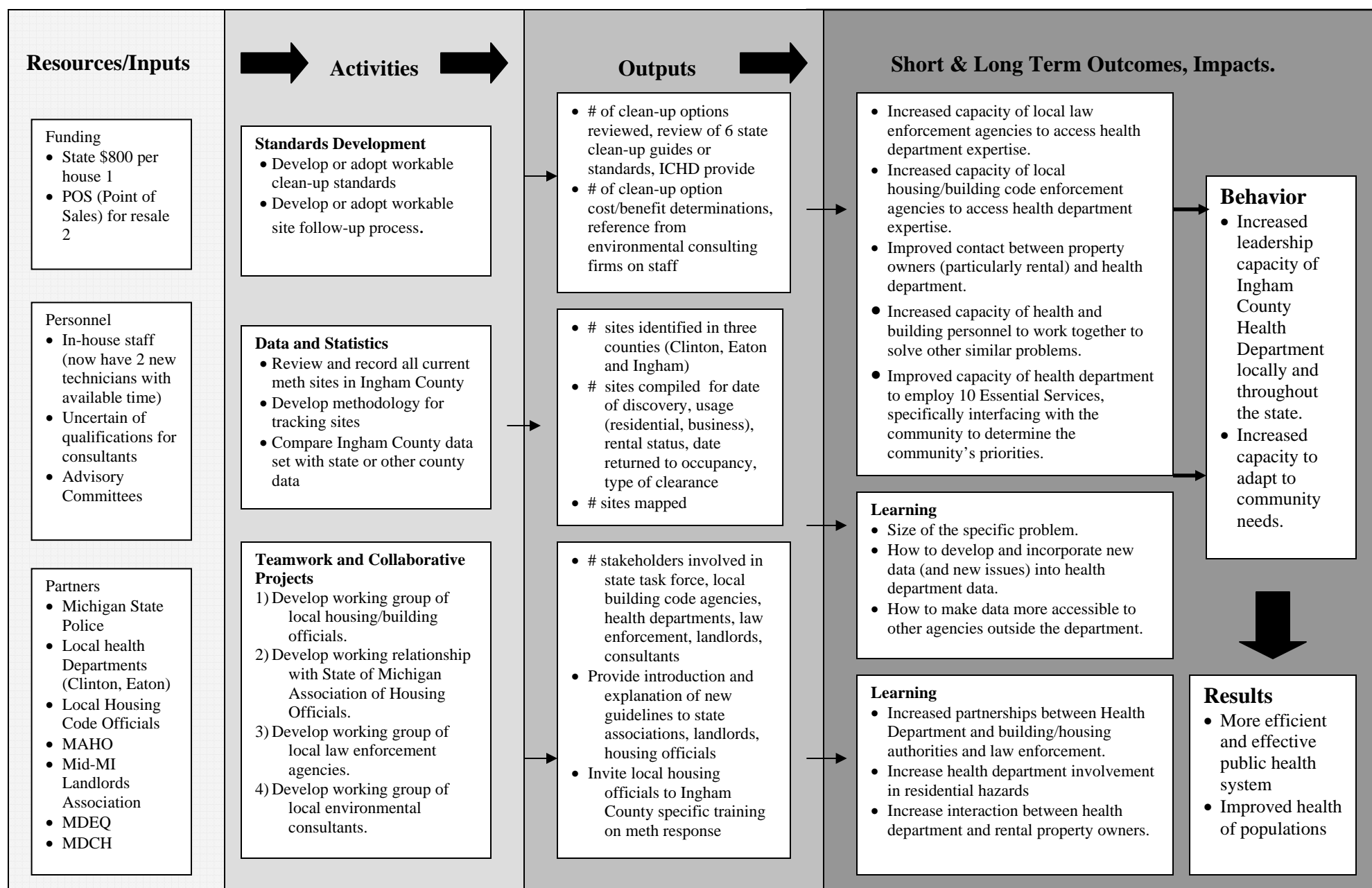
Environmental Health Competency Project: Recommendation for Core Competencies for Local Environmental Health Practitioners can be found at:

[http://www.apha.org/ppp/Env\\_Comp\\_Booklet.pdf](http://www.apha.org/ppp/Env_Comp_Booklet.pdf) . Among the core competencies listed is: “ **B2** Economic and Political Issues: “

Specific Core Competency	Project Applicability	Process
Understand and maintain awareness of basic economic issues.	CDLs present a specific economic case unlike most drug production.	Data collection and analysis on site dispositions.
Understand local history and community demographics, as well as cultural and political issues and sensitivities.	CDLs incidence is not static and project will help clarify historic and future trends.	Data collection and analysis on site dispositions.
Enforce regulations equitably and consistently - but with an awareness of the political realities of the work	CDL currently have a weak regulatory status.	Development of State-wide guidelines.
Develop and present options	Many other states have already developed guidelines or standards with a wide variety of approaches.	Review of other state statutes was done at the outset of the Michigan State Task Force.
Understand the economic and political underpinnings and implications of broader agency priorities/decisions.	Need to bring in a variety of stakeholders.	State Task Force included environmental and public health agencies, housing authorities, landlords, and environmental consultants.



**Project Logic Model**    **Goal:** To reduce the accumulation of potentially contaminated sites created by former CDLs, returning them to safe and active use.



## PROJECT OBJECTIVES/DESCRIPTION/DELIVERABLES:

### Program Goal:

- ✓ *To reduce residential, chemical exposures to Michigan citizens through the creation of a cooperative, relationship between Public and Environmental Health Agencies, Housing Agencies, Law Enforcement, and Property Owners (in particular Landlords), both formal and informal, both at the local and state level.*

### Health Problem:

- ✓ *Potential exposure to precursor chemicals or methamphetamine.*
- ✓ *Potential social health impacts derived from abandoned residential sites.*

### Outcome Objective:

- ✓ *To reduce potential exposure to future residents of identified CDL sites.*
- ✓ *To develop a cooperative relationship between Environmental Health, Housing and Landlords.*

### Determinant:

- ✓ *Adoption of cost effective State of Michigan CDL Clean-up Guidelines*
- ✓ *Presentation of Guidelines to both Michigan Association of Housing Officials (MAHO) and Michigan Landlord Association.*
- ✓ *Provide analysis of site accumulation data.*

### Impact Objective:

- ✓ *Lower rates of CDL prevalence.*

### Contributing Factors:

- ✓ *Lack of definitive exposure studies.*
- ✓ *Lack of national standards.*
- ✓ *Lack of prevalence data and site post-identification tracking.*
- ✓ *Varied and sometimes competing objectives by stakeholders.*

### Process Objectives

- ✓ *To assist in development of a regulatory framework a non-traditional environmental health problem from the earliest stages. This would allow me to research and analyze a variety of regulatory approaches, including economic impact.*
- ✓ *The main process objective was to initiate a better working relationship between public and environmental health agencies, housing and code enforcement officials, and the*

housing community (starting with landlord associations). I have been surprised at how little interaction these separate groups have. I was a founding member of the Michigan Housing Officials Association (MAHO) nearly 15 years ago. In the intervening years I have remained the only environmental health agency representative. I believe this project has (and will further help) helped at both the local (Ingham County) level and the state level.

- ✓ To assist in developing a cost effective standard for CDL clean-up in Michigan.
- ✓ To gather and analyze accumulated data for identified sites. Data include, date of site identification, site use (rental, owner occupied), reoccupation date.

## **METHODOLOGY:**

### ***Events and Activities:***

- ✓ Work on State task force, analyze a range of other state approaches (siting advantageous and disadvantages), and incorporate stakeholder viewpoints. Produce clean-up guidelines by February 28, 2006.
- ✓ Bring together housing officials in Ingham County to develop partnerships not only on CDL's but all environmental health related housing issues, November 2006.
- ✓ Hold clean-up standard presentation state wide to housing official and landlord association conferences, June 2007 and August 2007, both of which I scheduled as a speaker.
- ✓ Create data for incidence, prevalence, and associated property parameters in 3 Michigan counties, summer 2007. Parameters include:
  - Date of identification
  - Use of site prior to identification
  - Responsible agency
  - Type of occupancy restriction
  - Type of clean-up activity and responsible party (owner, consultant firm)
  - Date returned to service.
  - Tax assessment value of property
  - Cost of clean-up
  - Median housing cost of neighborhood (census block)

## **RESULTS:**

1. The State of Michigan Methamphetamine Site Task Force was initiated June of 2006. It has completed work on what I believe to be a cost effective clean-up standard, will be submitted to legislative committee on March 1<sup>st</sup>, 2007. General text will be available at: <http://www.legislature.mi.gov> .
2. Am on agenda for presentation of Guidelines to MAHO (June 2007) and Mid-Michigan Landlord Association (August 2007).

## **Next Steps:**

1. Compilation of Eaton and Clinton county CDL data.
2. Release of site data for Clinton, Eaton, and Ingham counties July 2007.

**Expected Outcomes:**

1. Initial data from Ingham and Clinton counties place average turn around at about 9 months.
2. Most residential sites have not had any formal review of clean-up or clearance.
3. Most are rental properties.
4. Most new tenants are aware of CDL history, but most gained knowledge through neighbors not landlord.
5. Owner performed clean-ups are difficult to extract. Most landlords have also included other “remodeling” activities with clean-up.

**CONCLUSIONS:**

This project was successful in assisting the development of State of Michigan Guidelines for the Clean-Up of Clandestine Drug Laboratories. These guidelines will be submitted by the task force by February 28<sup>th</sup>, 2007. The task force included many stakeholders. These guidelines, when adopted, will need to be presented to various stakeholders, including landlords and housing officials. I have already been asked to present them at state wide conferences. This has and will lead to better relationships between environmental health, law enforcement, housing agencies, and landlords.

This project now has access to a considerable amount of site data. This data will be analyzed for several parameters including use, re-occupancy times and rates, and clearance costs. This will assist environmental and housing professionals to better estimate the extent of CDLs, and the effect of various regulatory approaches.

**LEADERSHIP DEVELOPMENT OPPORTUNITIES:*****Michael L. Allen***

This project has allowed me the opportunity to participate at a state wide level in analyzing options for and developing a regulatory approach to an environmental issue which presents unique concerns. It has allowed me to take the lead in developing new partnerships between environmental health and groups such as housing officials and landlords. I have been encouraged to run for (and will submit my application April 2007) the Michigan Association of Housing Officials (MAHO) Board, to bring the public and environmental health perspective to the association. In both these aspects I have been able to work from the very foundation of this problem. This has allowed me to research and become familiar with the economic and social aspects of residential contamination.

## **ABOUT THE EPHLI FELLOW**

Michael L. Allen B.S., M.S., R.S. received both BS and MS from Michigan State University, Medical Technology and Biochemistry. Mr. Allen's previous employment and studies were at Michigan State University Pesticide and Plant Pathology Laboratories; biomechanics of pesticide uptake and distribution. Currently he is the toxicologist and environmental epidemiologist for Ingham County Health Department, responsible for toxicological profiles and investigations, oversight of contamination sites, and all indoor air or residential exposure programs. He is a member of the Society for Risk Analysis, the Michigan Society of Toxicology, and the Michigan Society for Infection Control. He is a founding member of the Michigan Association of Housing Officials. He is a regular speaker throughout the state on a variety of topics including toxic exposures and indoor air.

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